I claim:

1. A rotary internal combustion engine, comprising:
a compression chamber adapted to receive fuel and compress the fuel;
an ignition chamber adapted to receive compressed fuel from the compression chamber and combust the compressed fuel; and
a center wall between the compression chamber and ignition chamber adapted to allow passage of compressed fuel from the compression chamber to the ignition chamber.

2. The apparatus of claim 1, further comprising a first rotor rotatably received within the compression chamber and a second rotor rotatably received within the ignition chamber.

3. The apparatus of claim 2, wherein each rotor has a vane slidably mounted in a radially extended slot so that rotation of the rotors will cause outer ends of the vane to engage the chambers to vary the space on opposite sides of the vane when the rotors are rotating.

4. The apparatus of claim 1, further comprising a transfer port in the center wall adapted to permit compressed fuel to move from the compression chamber into the ignition chamber.

5. The apparatus of claim 2, further comprising a transfer port in the center wall adapted to permit compressed fuel to move from the first rotor to the second rotor, and wherein the first rotor includes a

fuel injection port for permitting the flow of fuel from the compression chamber to the transfer port.

6. The apparatus of claim 2, further comprising a transfer port in the center wall adapted to permit compressed fuel to move from the first rotor to the second rotor, and wherein an ignition port in the second rotor conveys fuel from the transfer port to the ignition chamber.

7. The apparatus of claim 1, wherein a plurality of the rotary internal combustion engines are used in series along the same axis of rotation.

8. A rotary internal combustion engine, comprising:

a compression chamber adapted to receive fuel and compress the fuel;

an ignition chamber adapted to receive compressed fuel from the compression chamber and combust the compressed fuel;

a center wall between the compression chamber and ignition chamber adapted to allow passage of compressed fuel from the compression chamber to the ignition chamber;

the compression chamber having an oval shaped chamber wall;

the ignition chamber having an oval shaped chamber wall;

a first rotor having a circular perimeter surface rotatably received within the compression chamber; and

a second rotor having a circular perimeter surface rotatably received within the ignition chamber.

9. The apparatus of claim 8, wherein the chamber walls have arcuate compartment zones between perimeter surfaces of the rotors and the lengthwise ends.

10. The apparatus of claim 8, wherein each rotor has a pair of oppositely disposed vanes slidably mounted in radially extended slots so that rotation of the rotors will cause outer ends of the vanes to engage the chambers to vary the space on opposite sides of the vanes when the rotors are rotating.

11. The apparatus of claim 8, further comprising transfer ports in the center wall adapted to permit compressed fuel to move from the compression chamber into the ignition chamber.

12. The apparatus of claim 11, wherein the first rotor includes fuel injection ports for permitting the flow of fuel from the compression chamber to the transfer ports.

13. The apparatus of claim 11, wherein ignition ports in the second rotor to convey fuel from the transfer ports to the ignition chamber.